

REMARKS

By this Amendment, claim 35 is amended to overcome the rejection under 35 U.S.C. 112 and new claims 72 and 73 are added to more fully claim the disclosed invention. Those claims are patentable over the prior art for substantially the same reasons as those asserted herein with regard to the other pending claims. Claims 35-73 are pending.

Claims 33, 38, 43, 46, 51, 52, 60, 63, and 63-71 were rejected under 35 U.S.C. 102e) as being anticipated by Haartsen (U.S. 5,953,323). Claims 36-42, 45, 53-59 and 62 were rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen in view of Leung et al. (U.S. 6,262,980; hereafter “Leung”) and claims 44, 47-50, 61 and 64-67 were rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen in view of Mousley (U.S. 6,407,993). Applicant traverses the rejections because the cited prior art, analyzed individually or in combination fails to disclose, teach or suggest all the features recited in the rejected claims.

For example, the cited prior art fails to teach or suggest the claimed method including “transmitting, on a shared channel on which at least one receiver receives, data packets provided with a training sequence, wherein data packets addressed to at least one of different receivers and different receiver groups are provided with different training sequences,” (as recited in claim 35 and its dependent claims), the claimed communication system including “wherein the at least one transmitter transmits, on a shared channel, data packets provided with a training sequence, on which channel the at least one receiver receives the data packets, generates a channel estimate on the basis of the training sequence, processes received data packets having a training sequence that the at least one receiver identifies, and ignores received data packets having a training sequence that the at least one receiver does not identify,” (as recited in independent claim 52 and its dependent claims), the claimed transmitter in a communication system, characterized in that “the transmitter is arranged to transmit on the shared channel data packets addressed to different receivers or receiver groups with different training sequences,” (as recited in independent claim 68 and its dependent claims).

The Office Action erroneously asserted that “... information messages carried in the BCH SB includes status and identity information related to the transmitting private base station” (see Response to Arguments at page 9). However, in Haartsen’s synchronization, information specific to the transmitter is transmitted whereas, in the present invention, the identification information (i.e., the training sequence) in the transmitted signal is specific to the receiver; in this way, the receivers are identified using different training sequences.

The Office Action asserted that Haartsen discloses providing bursts transmitted to terminals receiving data on a shared channel with different training sequences. In particular, the Office Action referred to the passage at page 3, line 58 to page 4, line 67. However, page 4, lines 2-4 teach that the frequency correction burst and the synchronization burst formats are defined according to the frequency correction burst and synchronization burst formats used in the GSM.

Thus, Applicants refer to the book “The GSM system,” (submitted in conjunction with the response to the previous Office Action) which teaches the burst structure for a synchronization burst, and particularly chapter 4.3.1.3, which teaches that one unique training sequence must be used; that chapter teaches that use of only one unique training sequence is necessary because, otherwise, a mobile station would be unable to know the sequence chosen by the base station. As a result, Applicants submit that Haartsen teachings actually would have understood by one of ordinary skill in the art to use one unique training sequence in the synchronization bursts.

As for frequency correction bursts, Applicants direct the Examiner’s attention to chapter 4.3.1.4 in “The GSM system” book, which teaches that all of its 148 bits are set to “0”. Thus, based on the clarified understanding of Haartsen provided by “The GSM system” book, Haartsen clearly fails to teach any variability in frequency correction bursts either because all bits are set to “0”. Therefore, in Haartsen, all synchronization and frequency correction bursts are transmitted with only one type of training sequence (i.e., synchronization bursts are predefined, frequency correction bursts are all zeros) (see also Figures 3 and 4 and the specification passage at page 4, lines 25-47 of Haartsen).

The Office Action further asserted that “[s]ince BCH includes FB and SB pairs, establishing wherein data packets addressed to at least one of receiver groups are provided with different (a second or a third) FB/SB 64 bit training sequence.” (Response to Arguments, page 9) However, Applicant submits that frequency correction bursts and synchronization burst in Haartsen are separate bursts and each of them has a training sequence of its own.

As explained above, Haartsen’s training sequence in frequency correction bursts contains only zeros, whereas the training sequence of synchronization bursts is always the same, i.e., there is no variation. Thus, in Haartsen, a frequency correction burst/synchronization burst pair has no common “training sequence” that would be different from a training sequence of another pair.

Furthermore, Applicants respectfully submit that there are no second and third training sequences in Haartsen in the meaning that the data packets would have different data contents (such as training sequences). The second and third sequences in Haartsen only refer to different moments in time when FB/SB are transmitted.

The Office Action also referred to the Haartsen passage at column 9 lines 5-22, asserting that this passage teaches using at least three frequency correction burst/synchronization burst sequences.

However, that portion of Haartsen, and Haartsen in general, fail to teach or suggest using different training sequences. In fact, that passage uses the term “sequence” to refer to a sequence in time rather than a data bit sequence. This distinction can be readily recognized by reviewing the Haartsen specification at page 5, lines 1-15 and Figure 5, which disclose how frequency correction burst/synchronization burst pairs can be transmitted in 26 frame sequences. Thus, Haartsen teaches that when a frequency correction burst is found, the synchronization burst is searched every subsequent eleventh frame. This is also illustrated in Figure 2, wherein the frequency correction burst/synchronization burst sequence occurs three times in 35 frames. That is, the frequency correction burst/synchronization burst pair is present three times in the duration of 35 TDMA frames. The contents of the frequency correction burst/synchronization burst are not changed however, and Haartsen fails to teach or suggest that the training sequences in those bursts would be different, which would be contrary to the GSM system specification.

Moreover, Applicants submit that Haartsen fails to disclose, teach or suggest transmission of “addressed” data packets, as referred to in the claims. In Haartsen, during synchronization, the network is unaware of new users coming to its area and synchronizing bursts are not intentionally transmitted to any specific users. Therefore, because Haartsen’s synchronizing system does not intentionally address data packets to different users, Haartsen does not teach or suggest providing data packets with different training sequences to indicate that particular data packets are meant to be received by particular users.

Therefore, Applicants submit that Haartsen fails to disclose, teach or suggest “transmitting, on a shared channel on which at least one receiver receives, data packets provided with a training sequence, wherein data packets addressed to at least one of different receivers and different receiver groups **are provided with different training sequences,**” as recited in independent claim 35.

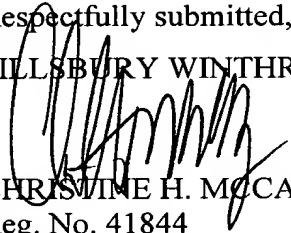
Leung and Mouldsley fail to remedy this deficiency of Haartsen. Therefore, the combined teachings of the cited prior art fail to teach or suggest all the features in the rejected claims. Accordingly, claims 35-73 are allowable.

All rejections and objections have been addressed. It is respectfully submitted that the present application is now in condition for allowance, and a notice to that effect is earnestly solicited. Should there be any questions or concerns regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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